

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**E. F. Burlingham and Sons**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (7 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TALL FESCUE

'Falcon'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 15th day of April in the year of our Lord one thousand nine hundred and eighty-two.

Attest:

*Kenneth H. Egan*  
Acting  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

*John R. Block*  
Secretary of Agriculture

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY NJ-78		1b. VARIETY NAME Falcon		FOR OFFICIAL USE ONLY PV NUMBER 8000160	
2. KIND NAME Tall fescue		3. GENUS AND SPECIES NAME Festuca arundinacea Schreb.		FILING DATE 9/25/80	TIME 12:00 <u>P.M.</u>
4. FAMILY NAME (BOTANICAL) Gramineae		5. DATE OF DETERMINATION August 1, 1979		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 9/25/80 2/16/82
6. NAME OF APPLICANT(S) E.F. Burlingham and Sons		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 217 Forest Grove, Oregon 97116		8. TELEPHONE AREA CODE AND NUMBER (503) 357-2141	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Oregon		11. DATE OF INCORPORATION 4/27/50	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Mr. Robert J. Peterson, E. F. Burlingham and Sons, P.O. Box 217, Forest Grove, Oregon 97116					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- 13B. Exhibit B, Novelty Statement.
- 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.)  YES  NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  
 YES  NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?  
 FOUNDATION  REGISTERED  CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES?  YES  NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES?  YES  NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL?  YES  NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

August 26, 1980

(DATE)

Robert J. Peterson  
 (SIGNATURE OF APPLICANT)

Vice President - E.F. Burlingham & Sons  
 (SIGNATURE OF APPLICANT)

(DATE)

## INSTRUCTIONS

**GENERAL:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service; Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

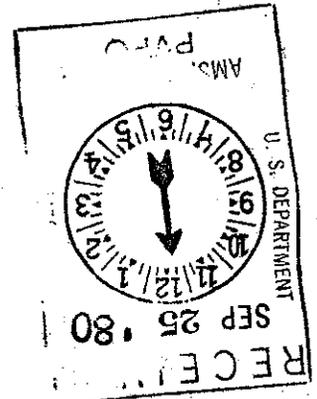


EXHIBIT A (Revised)

Origin and Breeding History of Falcon Tall Fescue

1. Falcon Tall fescue is an advanced generation synthetic cultivar derived from the progenies of 16 clones. Plants collected from old turf stands in Alabama, Georgia, New Jersey, Pennsylvania and Virginia contributed most of the parental germplasm of Falcon. Parental clones were selected from spaced-plant nurseries on the basis of attractive appearance, freedom from disease, ability to resist leaf roll during hot, dry weather, softness of leaf and acceptable seed yield. Single-plant progenies of these clones were evaluated in closely mowed turf trials in New Jersey and Oregon. Seedlings from selected clones exhibiting the best progeny performance were subsequently screened for resistance to crown rust (Puccinia coronata Corda F. Sp. festucae Erikss.), uniform maturity and improved seed yield.

2. Syn II breeder seed of Falcon Tall fescue was produced from an isolated, spaced-plant nursery of 1601 selected seedlings of the 16 parental clones. Seed propagation of Falcon is limited to two generations of increase from breeder seed--one each of foundation and certified.

3. Falcon is a stable and uniform variety.

No off-type plants or variants have been observed in the reproduction or multiplication of Falcon tall fescue.

Falcon tall fescue and each of the progenies of its parental clones have produced turf of good quality and acceptable uniformity. Breeder seed, Foundation seed, and Certified seed have all produced turf of comparable quality and acceptable uniformity.

EXHIBIT B

## Novelty Statement on Falcon Tall Fescue

Falcon tall fescue is a leafy, moderately low growing, turf-type cultivar. It has the ability to produce an attractive, more persistent turf with finer texture and higher density than most of the commercially available cultivars of tall fescue. Falcon has performed well in turf trials in New Jersey (Table 1). Falcon showed significantly higher turf performance scores than Kentucky 31, Monaco, Kenwell, Kenhy, Kenmont, Alta, Fawn or Goar.

In a closely mowed turf trial at Adelphia, New Jersey, Falcon produced finer leaves and a greater number of tillers per unit area than Kentucky 31, Fawn, Kenmont, Goar, Kenhy or Alta (Table 2). Falcon showed moderate resistance to the brown patch disease incited by Rhizoctonia solani in a turf trial at Adelphia, New Jersey (Table 3). Falcon showed significantly less damage than Kenmont, Kenwell, Fawn, Monaco, Kenhy, Goar or Alta. Falcon also showed moderate resistance to the Helminthosporium blight (netblotch) disease incited by Helminthosporium dictyoides in a turf trial at Adelphia, New Jersey (Table 4). Falcon showed significantly less damage than Kenhy, Kenmont, Kenwell, Kentucky 31, or Goar. Falcon has a medium early maturity showing a heading date seven days earlier than Rebel and seven days later than Alta (Table 5).

Falcon most closely resembles Rebel tall fescue. However, close comparisons show that the two cultivars differ in a number of characteristics as follows:

1. Falcon is significantly earlier in maturity (Table 11).
2. Falcon produces more panicles per unit area (Table 10).

In comparison with Kentucky 31, Falcon shows a number of differences including:

1. Falcon has shown better turf performance in New Jersey (Table 1).
2. Falcon can produce a finer, denser turf (Table 2).
3. Falcon has shown better resistance to Helminthosporium dictyoides (Table 4).
4. Falcon has a shorter flag leaf (Table 7).

Table 8. Flag leaf width measurements of tall fescue cultivars grown in seed yield trials near Hubbard, Oregon.

Cultivar	Flag leaf width July 1980 mm	Standard error of mean
1. Alta	6.98	0.73
2. Falcon	6.76	0.42
3. Fawn	6.58	0.28
4. Rebel	6.34	0.77
5. Kentucky 31	5.44	0.26

Table 9. Awn length measurements of tall fescue cultivars grown in seed yield trials near Hubbard, Oregon.

Cultivar	Awn length July 1980 mm	standard error of mean
1. Fawn	1.97	0.21
2. Alta	1.83	0.17
3. Kentucky 31	1.62	0.21
4. Falcon	1.46	0.13
5. Rebel	1.35	0.13

Table 10. Panicle counts of tall fescue cultivars grown in seed yield trials near Hubbard, Oregon.

Cultivar	Number of panicles per 5½-inch of row July 1980	standard error of mean
1. Fawn	43.5	2.17
2. Alta	42.3	1.24
3. Falcon	37.8	1.45
4. Kentucky 31	26.0	6.00
5. Rebel	25.8	1.54

Table 11. Heading dates of tall fescue cultivars grown in seed yield trials near Hubbard, Oregon

Cultivar	Date of fifty percent heading - 1980
1. Alta	April 30
2. Fawn	May 1
3. Kentucky 31	May 5
4. Falcon	May 7
5. Rebel	May 14

For Exhibit B

FIFTY PERCENT HEADING DATES OF TALL FESCUES  
IN YIELD TRIALS NEAR HUBBARD, OREGON

Cultivar or Selection	1979 August Planting		1980 August Planting
	1980 Dates	1981 Dates	1981 Dates
Falcon	5/7	5/9	5/11
Rebel	5/14	5/16	5/18
Kentucky 31	5/5	5/6	5/6
Alta	4/30	4/28	4/28

*Robert J. Peterson*

9/24/81

V.P. E.F. Burlingham & Sons

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
GRAIN DIVISION  
HYATTSVILLE, MARYLAND 20782  
**OBJECTIVE DESCRIPTION OF VARIETY**  
**FESCUE**  
(*Festuca* spp.)

NAME OF APPLICANT(S) <b>E. F. Burlingham and Sons</b>	VARIETY NAME OR TEMPORARY DESIGNATION <b>Falcon tall Fescue</b>
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) <b>P.O. Box 217 Forest Grove, Oregon 97116</b>	FOR OFFICIAL USE ONLY PVPO NUMBER <div style="font-size: 1.5em; font-weight: bold;">8000160</div>

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in first box (e.g.  or ) when number is either 99 or less or 9 or less. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Ranges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate system used: \_\_\_\_\_ Describe location of test area Hubbard, Oregon  
All questions need not be answered, however, completeness should be striven for in order to establish the most adequate Variety Identification.

**1. SPECIES:** (With comparison varieties for use below - use varieties within species of application variety)

<b>1</b>	1 = <u>F. ARUNDINACEA</u> (TALL)	11 = ALTA	12 = FAWN	13 = GOAR	14 = KENTUCKY 31
	2 = <u>F. PRATENSIS</u> (MEADOW)	21 = ENSIGN	22 = TRADER		
	3 = <u>F. RUBRA</u> SSP. <u>COMMUTATA</u> (CHEWINGS)	31 = CASCADE	32 = HIGHLIGHT	33 = JAMESTOWN	
	4 = <u>F. RUBRA</u> SSP. <u>RUBRA</u> (RED)	41 = BOREAL	42 = PENNLAWN	43 = DAWSON	
	5 = <u>F. OVINA</u> VAR. <u>OVINA</u> (SHEEP)				
	6 = <u>F. LONGIFOLIA</u> (HARD)	61 = DURAR	62 = BILJART (C-26)	63 = SCALDIS	
	7 = OTHER (SPECIFY) <u>F. _____</u>				

**2. CYTOLOGY**

4	2	2n CHROMOSOME NUMBER
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**3. ADAPTATION:** (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

Southern part	Higher elevations	Southern part		
2	2	2	2	2
NORTHEAST	SOUTHEAST	NORTH CENTRAL	PACIFIC N.W.	OTHER California (SPECIFY) _____

**4. MATURITY:** (50% Headed) Give Test Area

		<u>Hubbard, Oregon</u>		
		DAYS EARLIER THAN . . . . .		
		MATURITY SAME AS . . . . .		
2	2	DAYS LATER THAN . . . . .	1	4

} COMPARISON VARIETY

**5. PLANT HEIGHT:** (At maturity to top of panicle)

1	4	9	5	mm HEIGHT	
		mm SHORTER THAN . . . . .			
		HEIGHT SAME AS . . . . .			
5	7	mm TALLER THAN . . . . .		1	4

} COMPARISON VARIETY

**6. GROWTH HABIT (Mature)**

2	1 = ERECT (KENTUCKY 31)	2 = SEMI-ERECT (HIGHLIGHT)	3 = PROSTRATE
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**7. RHIZOMES** A few rhizomes may be expressed under some conditions

		mm LENGTH			mm WIDTH
0	0 = ABSENT	1 = WEAKLY CREEPING (DAWSON)	2 = STRONGLY CREEPING (BOREAL)	3 = OTHER _____	

**8. LEAF BLADE:** Darker than Kentucky 31

4	COLOR:	1 = LIGHT GREEN (GOLDFROOD)	2 = MODERATELY LIGHT GREEN (HIGHLIGHT)	3 = MEDIUM GREEN (JAMESTOWN, KENTUCKY 31)
		4 = DARK GREEN (CASCADE)	5 = BLUEGREEN	6 = GRAYGREEN
		7 = OTHER (SPECIFY) _____		

8. LEAF BLADE:

ANTHOCYANIN: 0 = ABSENT 1 = PRESENT  HAIRS (BASAL): 0 = ABSENT 1 = PRESENT  MARGINS: 1 = SMOOTH 2 = SEMI-ROUGH 3 = ROUGH

mm LENGTH (FIRST LEAF BELOW FLAG LEAF)   mm WIDTH

mm SHORTER THAN   } mm NARROWER THAN   }  
 LENGTH SAME AS   } COMPARISON VARIETY WIDTH SAME AS   } COMPARISON VARIETY  
  mm LONGER THAN   }   mm WIDER THAN   }

9. LEAF SHEATH (Plant Base):

COLOR: 1 = WHITE (HIGHLIGHT) 2 = RED  AURICLE HAIRINESS: 0 = ABSENT 1 = PRESENT

10. PANICLE (Mature plant)

5 1/2-inch of row

NUMBER OF PANICLES PER (FIRST YEAR OF PRODUCTION - FALL OR SPRING PLANTING SPECIFY fall)

mm LENGTH    GRAMS OF SEED PER PANICLE

mm SHORTER THAN   } GRAMS LESS SEED THAN   }  
 LENGTH SAME AS   } COMPARISON VARIETY WEIGHT SAME AS   } COMPARISON VARIETY  
  mm LONGER THAN   }   GRAMS MORE SEED THAN   }

SHAPE: 1 = NARROW-TAPERING 2 = EGG SHAPE 3 = OBLONG 4 = OTHER (SPECIFY) \_\_\_\_\_

TYPE: 1 = OPEN 2 = INTERMEDIATE 3 = COMPACT

HABIT: 1 = ERECT 2 = NODDING

BRANCHES: 1 = SMOOTH 2 = ROUGH

COLOR (At 50% flowering): 1 = YELLOWISH GREEN 2 = GREEN 3 = BLUISH GREEN 4 = PURPLISH 5 = REDDISH 6 = OTHER (SPECIFY) \_\_\_\_\_

11. PALEA:

HAIRS (ON KEELS): 0 = ABSENT 1 = SHORT (OLDS) 2 = LONG (RAINIER)

12. LEMMA:

HAIRS: 0 = ABSENT 1 = PRESENT  TEXTURE: 1 = SMOOTH 2 = ROUGH

mm LEMMA LENGTH   mm LEMMA WIDTH

mm SHORTER THAN   } mm NARROWER THAN   }  
 LENGTH SAME AS   } COMPARISON VARIETY WIDTH SAME AS   } COMPARISON VARIETY  
  mm LONGER THAN   }   mm WIDER THAN   }

AWNS: 0 = ABSENT 1 = PRESENT

mm AWN LENGTH

12. LEMMA:

<input type="text" value="1"/> <input type="text" value="1"/>	mm SHORTER THAN . . .	<input type="text" value="1"/> <input type="text" value="1"/>	} COMPARISON VARIETY
	LENGTH SAME AS . . .	<input type="text" value="1"/> <input type="text" value="1"/>	
<input type="text" value="1"/> <input type="text" value="1"/>	mm LONGER THAN . . .	<input type="text" value="1"/> <input type="text" value="1"/>	

13. SEED:

<input type="text" value="5"/> <input type="text" value="9"/> <input type="text" value="0"/>	mm LENGTH	<input type="text" value="1"/> <input type="text" value="5"/> <input type="text" value="0"/>	mm WIDTH	
<input type="text" value="1"/> <input type="text" value="3"/>	mm SHORTER THAN . . .	<input type="text" value="1"/> <input type="text" value="4"/>	} COMPARISON VARIETY	
	LENGTH SAME AS . . .	<input type="text" value="1"/> <input type="text" value="4"/>		
<input type="text" value="1"/> <input type="text" value="3"/>	mm LONGER THAN . . .	<input type="text" value="1"/> <input type="text" value="4"/>		
		<input type="text" value="1"/> <input type="text" value="4"/>	mm. NARROWER THAN	} COMPARISON VARIETY
		<input type="text" value="1"/> <input type="text" value="4"/>	WIDTH SAME AS . . .	
		<input type="text" value="1"/> <input type="text" value="4"/>	mm WIDER THAN . . .	
<input type="text" value="2"/> <input type="text" value="8"/> <input type="text" value="2"/> <input type="text" value="7"/>	GRAMS PER 1000 SEED			
<input type="text" value="1"/> <input type="text" value="1"/> <input type="text" value="1"/> <input type="text" value="1"/>	GRAMS LESS THAN . . .	<input type="text" value="1"/> <input type="text" value="4"/>	} COMPARISON VARIETY	
	WEIGHT SAME AS . . .	<input type="text" value="1"/> <input type="text" value="4"/>		
<input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="6"/> <input type="text" value="0"/>	GRAMS MORE THAN . . .	<input type="text" value="1"/> <input type="text" value="4"/>		

14. DISEASE, INSECT, AND NEMATODE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="text" value="0"/> <u>HELMINTHOSPORIUM VAGANS</u>	<input type="text" value="0"/> <u>H. SOROKINIANUM</u>	<input type="text" value="2"/> <u>H. DICTYOIDES</u> moderate
<input type="text" value="2"/> <u>RHIZOCTONIA SOLANI</u>	<input type="text" value="2"/> <u>ERYSIPE GRAMINIS</u>	<input type="text" value="2"/> <u>USTILAGO STRIIFORMIS</u>
<input type="text" value="0"/> <u>FUSARIUM NIVALE</u>	<input type="text" value="0"/> <u>F. ROSEUM</u>	<input type="text" value="0"/> <u>TYPHULA IOTANA</u>
<input type="text" value="0"/> <u>PUCCINIA GRAMINIS</u>	<input type="text" value="0"/> <u>P. STRIIFORMIS</u>	<input type="text" value="0"/> <u>P. POAE-NEMORALIS</u>
<input type="text" value="2"/> <u>P. CORONATA</u>	<input type="text" value="1"/> <u>PYTHIUM ULTIMUM</u>	<input type="text" value="2"/> <u>CORTICIUM FUSCIFORME</u>
<input type="text" value="2"/> <u>SCLEROTINIA HOMEOCARPA</u>	<input type="text" value=""/> INSECT _____	<input type="text" value=""/> NEMATODE _____
<input type="text" value=""/> OTHER _____	<input type="text" value=""/> OTHER _____	<input type="text" value=""/> OTHER _____

15. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics indicate degree of resemblance (D.R.) by placing in the column marked, D.R., one of the following numbers:

1 = Application variety is less than comparison variety  
 2 = Same as  
 3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D.R.
RHIZOME LENGTH	Rebel	2	GROWTH HABIT	Rebel	2
LEAF WIDTH	Rebel	2	LEAF COLOR	Rebel	2
PANICLE COLOR			PANICLE SHAPE		
WINTER COLOR			COLD INJURY		
SHADE TOLERANCE			HEAT		
DROUGHT			DISEASE*		
			Brown patch	Rebel	2

\*Specify each disease evaluated.

TABLE 10. LEAF SPOT RATINGS OF TALL FESCUE CULTIVARS.  
1979 Data.

Entry	Leaf Spot 1-9; 9 = Resistant: Locations			Mean <sup>1/</sup>
	MD	AK	OK	
1. Kenhy	6.3	8.0	5.5	6.7 a
2. Monaco	5.7	7.7	5.5	6.4 abc
3. PHB-1-S	4.7	7.7	5.0	5.9 bcd
4. L-FA-SYN-1	5.0	8.0	5.0	6.1 a-d
5. AG-125	5.7	7.7	5.5	6.4 abc
6. NJ-78	5.7	8.3	5.0	6.5 ab
7. Kenwell	4.0	7.3	5.0	5.5 cde
8. Blend 36-1	4.0	7.0	6.0	5.6 b-e
9. K5-27	4.7	7.0	7.0	6.1 a-d
10. Rebel	5.0	8.0	5.0	6.1 a-d
11. Fawn	2.7	7.0	5.0	4.9 e
12. Ky-31	4.3	7.7	5.5	5.9 bcd
13. Kenmont	4.0	7.0	5.0	5.4 de
14. Alta	2.7	7.0	5.5	5.0 e
15. Goar	2.0	8.0	5.0	5.0 e
16. Syn 16-1	5.0	7.0	5.5	5.9 bcd
17. KPH-1	4.7	8.0	5.0	6.0 a-d
18. TF-11	4.3	7.3	5.0	5.6 b-e
19. TF-25	5.0	7.7	5.5	6.1 a-d

<sup>1/</sup> Means followed by the same letter are not significantly different (DMR 0.05).

TABLE 11. BROWN PATCH RATINGS OF TALL FESCUE CULTIVARS.  
1979 Data.

Entry	Brown Patch 1-9; 9 = Resistant: Locations			Mean <sup>1/</sup>
	NJ	MD	KY	
1. Kenhy	3.7	5.7	7.7	5.7 bc
2. Monaco	3.7	5.3	6.7	5.2 c
3. PHB-1-S	5.7	6.3	8.0	6.7 ab
4. L-FA-SYN-1	5.7	6.0	8.7	6.8 ab
5. AG-125	5.0	7.0	6.7	6.2 abc
6. NJ-78	6.0	7.3	8.0	7.1 a
7. Kenwell	5.0	6.0	3.7	4.9 c
8. Blend 36-1	6.0	6.3	8.0	6.8 ab
9. K5-27	5.7	6.7	8.0	6.8 ab
10. Rebel	5.3	7.7	8.7	7.2 a
11. Fawn	3.7	4.7	8.3	5.6 bc
12. Ky-31	5.3	5.0	6.0	5.4 bc
13. Kenmont	4.7	4.7	7.7	5.7 bc
14. Alta	3.3	5.0	8.0	5.4 bc
15. Goar	3.7	4.7	7.0	5.1 c
16. Syn 16-1	4.7	6.3	5.3	5.4 bc
17. KPH-1	5.0	6.0	7.7	6.2 abc
18. TF-11	4.3	6.0	5.0	5.1 c
19. TF-25	3.7	5.7	6.0	5.1 c

<sup>1/</sup> Means followed by the same letter are not significantly different (DMR 0.05).

RECORDATION FORM COVER SHEET  
PVP CERTIFICATES ONLY

To the Acting Commissioner of the Plant Variety Protection Office. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
**E. F. Burlingham & Sons**  
 Individual(s)       Association  
 General Partnership       Limited Partnership  
 Corporation - State **Oregon**  
 Other \_\_\_\_\_  
Additional name(s) of conveying party(ies) attached?  Yes  No

2. Name and address of receiving party(ies):  
Name: **BANKAMERICA BUSINESS CREDIT, INC.**  
Street Address: **55 South Lake Avenue, Suite 900**  
City: **Pasadena** State: **California**  
ZIP: **91101**

3. Nature of conveyance:  
 Assignment       Merger  
 Security Agreement       Change of Name  
 Other \_\_\_\_\_  
Execution Date: **June 23, 1998**

Individual(s) citizenship \_\_\_\_\_  
 Association \_\_\_\_\_  
 General Partnership \_\_\_\_\_  
 Limited Partnership \_\_\_\_\_  
 Corporation-State **Delaware**  
 Other \_\_\_\_\_

If assignee is not domiciled in the United States, a domestic representative designation is attached:  Yes  No  
(Designation must be a separate document from Assignment)  
Additional name(s) & address(es) attached?  Yes  No

4. PVP certificate identifying information:

A. PVP No.: **8000160**  
B. Date certificate issued or application filed: **04/15/82**  
C. Variety: **"FALCON" Fescue, tall Falcon**

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:  
Name: **Tamsen Valoir**  
**Jenkins & Gilchrist**  
Internal Address: \_\_\_\_\_  
Street Address: **1445 Ross Avenue,**  
**Suite 3200**  
City: **Dallas** State: **Texas** Zip: **75202-2799**

6. Total number of PVP applications or certificates involved: **1**  
7. Total fee (37 CFR 3.41): \$ **25.00**  
 Enclosed  
 Authorized to be charged to deposit account.  
8. Deposit Account number: \_\_\_\_\_  
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

**Tamsen Valoir**  
Name of Person Signing

  
Signature

**June 30, 1998**  
Date

Total number of pages comprising cover sheet: **1**

**PVP CERTIFICATE SECURITY AGREEMENT**

**WHEREAS**, E. F. BURLINGHAM & SONS, an Oregon corporation ("Assignor"), having a business address of 1936 19th Avenue, Forest Grove, OR 97116 is the owner of the issued Plant Protection Act (PVP) certificate(s) listed below; and

**WHEREAS**, BankAmerica Business Credit, Inc., a Delaware corporation, having an office at 55 South Lake Avenue, Suite 900, Pasadena, California 91101 as "Agent" for the "Lenders" as defined and described in the Loan and Security Agreement dated as of June 23, 1998 ("Assignee"), is desirous of acquiring a SECURITY INTEREST in such PVP certificate(s);

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, said Assignor does hereby sell, assign, transfer and set over unto the said Assignee a SECURITY INTEREST in, to, and under the PVP certificate(s):

**No. 8000160 Issued**  
**No. 8000101 Issued**

E. F. BURLINGHAM & SONS

By: *Henry A. Ingalls*  
Printed Name: Henry A. Ingalls  
Title: Vice President

**STATE OF TEXAS** §  
§  
**COUNTY OF DALLAS** §

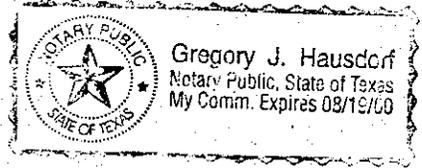
Henry A. Ingalls, Vice President, of E. F. BURLINGHAM & SONS, personally appeared before me, and being first duly sworn declared that he signed the security agreement in the capacity designated, and further states that he has read the above security agreement, and the statements therein contained are true.

**SUBSCRIBED AND SWORN TO** before me this 23 day of June, 1998.

*Gregory J. Hausdorf*  
Notary Public in and for the State of Texas

My Commission Expires:  
\_\_\_\_\_

\_\_\_\_\_  
Printed Name



UNITED STATES DEPARTMENT OF AGRICULTURE  
PLANT VARIETY PROTECTION OFFICE

CERTIFICATE OF MAILING

BOX ASSIGNMENT

Acting Commissioner of the Plant Variety Protection Office  
Plant Variety Protection Office  
10301 Baltimore Blvd.  
Beltsville, MD 20705-2351.

Dear Sir:

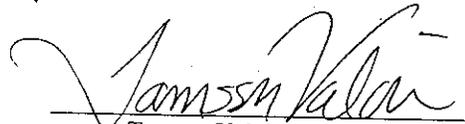
I hereby certify that this correspondence,

74 Cover sheets  
74 Assignments  
Check in the amount of \$1,850.00 (74 x \$25.00)  
74 Return postcards

for the attached (in Exhibit A) PVP certificate numbers are being deposited with the United States Postal Service as Express Mail, mailing label number EE507465254US, postage prepaid, in an envelope addressed to:

BOX ASSIGNMENT

Acting Commissioner of the Plant Variety Protection Office  
Plant Variety Protection Office  
10301 Baltimore Blvd.  
Beltsville, MD 20705-2351.

  
Tamsen Valoir

Date: July 1, 1998

IPHOU:15412.1 20992-00039

**Jenkins & Gilchrist**

A PROFESSIONAL CORPORATION  
1100 LOUISIANA STREET, SUITE 1800  
HOUSTON, TEXAS 77002

TEXAS COMMERCE BANK, N.A.  
301 W. BEAUREGARD  
SAN ANGELO, TEXAS 76903

903870

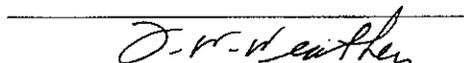
DATE	AMOUNT
July 1, 1998	*\$1,850.00*

AY

\*One Thousand Fifty Dollars and 00 Cents\*

TO THE  
ORDER  
OF

U. S. Department Of Agriculture  
Plant Variety Protection Office



TWO SIGNATURES REQUIRED OVER \$2500  
VOID AFTER 180 DAYS  
NOT VALID FOR OVER \$5000

⑈0903870⑈ ⑆111300880⑆ ⑈06300009654⑈

NOV 24 1999

No. C 7946-89  
*Dean Heller*  
DEAN HELLER, SECRETARY OF STATE

**ARTICLES OF MERGER  
OF  
E. F. BURLINGHAM & SONS  
INTO  
AGRIBIOTECH, INC.**

Pursuant to the provisions of N.R.S. §92A.180 and N.R.S. § 92A.200, AgriBioTech, Inc., a Nevada corporation, hereby submits these Articles of Merger for the purpose of merging E. F. Burlingham & Sons, an Oregon corporation and wholly-owned subsidiary of AgriBioTech, Inc., into AgriBioTech, Inc.

**ARTICLE I.**

**Corporations Proposing to Merge and Surviving Corporation**

The name of the merging corporation is E. F. Burlingham & Sons, an Oregon corporation (hereinafter called the "Subsidiary Corporation"); and the name of the corporation which shall be the surviving corporation is AgriBioTech, Inc., a Nevada corporation (hereinafter called the "Parent Corporation").

**ARTICLE II.**

**Adoption of Plan of Merger**

The Plan of Merger set forth in Article IV was duly adopted by the Parent Corporation and the Subsidiary Corporation.

**ARTICLE III.**

**Approval by Shareholders**

Pursuant to N.R.S. § 92A.180, neither the approval of the Shareholders of the Parent Corporation, nor the approval of the Shareholders of the Subsidiary Corporation was required.

**ARTICLE IV.**

**Plan of Merger**

The following Plan of Merger was duly approved on November 15, 1999, in the manner prescribed by law with respect to each of the corporations participating in the Merger:

Section 1. **Corporations Proposing to Merge and Surviving Corporation.** The name of the merging corporation is E. F. Burlingham & Sons, an Oregon corporation (hereinafter called the "Subsidiary Corporation"); and the name of the corporation which shall be the surviving corporation is AgriBioTech, Inc., a Nevada corporation (hereinafter called the "Parent Corporation").

Section 2. Effective Time of Merger. The effective time of the merger shall be November 29, 1999 at 11:59 p.m. E.S.T. (the "Effective Time").

Section 3. Effects of Merger. The Merger shall have the effects set forth in N.R.S. § 92A.250.

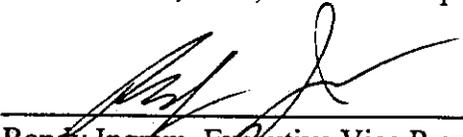
Section 4. Conversion of Shares. Each share of capital stock of the Subsidiary Corporation issued and outstanding at the Effective Time shall, as of the Effective Time, by virtue of the Merger and without any action on the part of the holder thereof, be canceled and extinguished without consideration given therefor. The shares of capital stock of the Surviving Corporation shall continue to be outstanding without change.

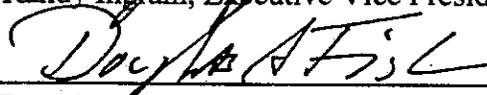
Section 5. Articles of Incorporation and Bylaws. The Articles of Incorporation and the Bylaws of the Surviving Corporation as in effect immediately prior to the Effective Time shall become the Articles of Incorporation and Bylaws of the Surviving Corporation following the Effective Time until changed in accordance with their terms and applicable law.

*[Signature page to follow]*

This the 15<sup>th</sup> day of November, 1999.

AGRIBIOTECH, INC., a Nevada corporation

By:   
Randy Ingram, Executive Vice President

By:   
Douglas A. Fisher, Secretary

SURVIVOR

715248-89

FILED

NOV 24 1999

OREGON  
SECRETARY OF STATE

ARTICLES OF MERGER OF  
E.F. BURLINGHAM & SONS  
INTO  
AGRIBIOTECH, INC.

Pursuant to the provisions of Sections 60.491 and 60.501 of the Oregon Revised Statutes ("ORS"), AgriBioTech, Inc., a Nevada corporation, hereby submits these Articles of Merger for the purpose of merging E.F. Burlingham & Sons, an Oregon corporation and wholly-owned subsidiary of AgriBioTech, Inc., into AgriBioTech, Inc. (the "Merger").

ARTICLE I  
Plan of Merger

The following Plan of Merger was duly adopted on November 15, 1999, in the manner prescribed by law with respect to each of the corporations participating in the Merger:

Section 1. Names. The name of the subsidiary corporation and merging corporation is E.F. Burlingham & Sons, an Oregon corporation (the "Subsidiary Corporation"). The name of the parent corporation and surviving corporation is AgriBioTech, Inc., a Nevada corporation (the "Parent Corporation").

Section 2. Effective Time of Merger. The effective time of the Merger shall be November 29, 1999 at 11:59 p.m. E.S.T. (the "Effective Time").

Section 3. Merger. The Subsidiary Corporation shall be merged with and into the Parent Corporation and the Parent Corporation shall be the surviving corporation.

Section 4. Conversion of Outstanding Stock. Each share of capital stock of the Subsidiary Corporation issued and outstanding at the Effective Time shall, as of the Effective Time, by virtue of the Merger and without any action on the part of the holder thereof, be canceled and extinguished without consideration given therefor. The shares of capital stock of the Surviving Corporation shall continue to be outstanding without change.

Section 5. Effects of Merger. The Merger shall have the effects set forth in ORS Section 60.497.

ARTICLE II  
Shareholder Approval

The Parent Corporation is the owner of all of the outstanding shares of each class of the Subsidiary Corporation's stock. In accordance with ORS Section 60.491, shareholder approval of the Plan of Merger by one or more corporations party to the Merger is not required.

ARTICLE III  
Contact

The person to contact regarding this filing is Anne L. Barragar, Esq., whose telephone number is (503) 778-5319.

*[Signature page to follow]*

The undersigned declares the facts herein stated are true as of the 16<sup>th</sup> day of November, 1999.

AGRIBIOTECH, INC.

By: 

Name: Randy Ingram

Title: Executive Vice President